



MORTON ARBORETUM

JOY MORTON • FOUNDER

BULLETIN OF POPULAR INFORMATION

LISLE, ILLINOIS

SOME PLANTS WITH CONTORTED BRANCHES

Among plant oddities those forms with contorted, twisted or fasciated branches have received considerably less attention and publicity than any of the other special groups. And, while limited in number and in many instances devoid of ornamental value, they are quite as interesting botanically as the weepers, the fastigate or columnar varieties, the dwarfs and the other oddly shaped or freakish types.

The fact, too, that current landscape architectural trends favor the use of fewer plant materials and greater dependence upon specially selected specimens as centers of interest, means that more opportunities now exist for the incorporation of some of the better of the so called curiosities into the planting scheme. Irregular branches by their very nature epitomize picturesqueness, and whatever the season their inherent beauty is there to see. Snow accentuates in a particularly pleasing way the line of bare twig and branch and sun duplicates the beauty in shadow form. Even foliage, unless abnormally heavy, fails to detract from the character of outstanding linear structure.

To answer briefly a question sure to arise, namely, where have these unusual varieties come from, we can only suggest possible origins. The seed beds of nurseries or botanical gardens is one. Here, natural variations in habit, height and color are constantly making their appearance. "Sports", occurring on branches of otherwise normal specimens are another important source. So called "Witches'-broom", that curious conglomeration or disfiguration of branches arising from insect irritation or some constriction of sap, has given rise to numerous freakish deviations among both coniferous and deciduous materials. Such variations may be perpetuated by grafting. Environment has also produced abnormalities such as the stunted, irregular growth of trees at high altitudes. These characteristics, resulting from a continuous struggle with the elements, are not always constant under more normal growing conditions.

The annotated list of contorted branched plants following represents the result of a search through botanical literature and nursery catalog files. It does not pretend to be all inclusive, and has not been limited in scope by either adaptability or availability. A distinction is made, how-

ever, between subjects included in The Morton Arboretum collection and those not recommended for local use. Unfortunately for those interested, sources of supply of many of the items are unknown.

**Abies alba tortuosa* (Rehd.) (syn. "*pectinata monstrosa*", "*pectinata tortuosa*"), (Booth, Beiss), Twisted Silver Fir

A dwarf form with twisted branches and bent, irregularly arranged needles.

Abies Sibirica monstrosa (Schroder, Beiss), Contorted Siberian Fir
Described as a monstrosity with short tufted and twisted branchlets.

Alnus incana monstrosa, Flatbranch Speckled Alder

A bushy headed small tree distinguished by broad, fasciated branches.

Betula pendula tortuosa, Contorted European White Birch

A weeping birch with crooked stems. Grown at the Botanic Garden of the University of Upsala, Upsala, Sweden. In 1938 it was also included in the collection of the Munich, Germany Botanic Garden.

Caragana arborescens nana (Jaeg.) Dwarf Siberian Peashrub

Dwarf contorted branched shrub of stunted appearance.

MA *Caragana Maximowicziana* (Komarov)

Slender irregular branches and a picturesque spreading habit of growth distinguish this small leaved yellow flowered shrub from West China. Maximum height from 3 to 5 feet. We consider it an excellent landscape subject for special use.

**Cedrus libani tortuosa*, Contorted Cedar of Lebanon

A rare form of the stately Cedar of Lebanon known for its peculiarly contorted branches.

MA *Chaenomeles japonica contorta*, Contorted Japanese Quince

This slender, contorted branched Japanese Quince was presented to the Arboretum in 1953 by Mr. C. McLewis, "Skylands", Sloatsburg, New York.

**Chamaecyparis lawsoniana lycopodioides* (Biess), Lycopod Lawson Falsecypress

A variety of the noble Lawson Falsecypress with irregular branches and twisted branchlets.

MA *Corylus Avellana* (L.) *contorta* (Bean), Curly European Filbert

This curious variety with remarkably curled and twisted branches was discovered about 1863 in a hedge row at Frocester, Gloucestershire. It is of slow growth, eventually reaching an ultimate

MA = Currently included in the Morton Arboretum Collection

* = Not recommended for the Chicago area

height of 6 ft. or so. As a landscape specimen it possesses some merit, its branches casting interesting shadows and displaying a special picturesqueness when snow covered.

Crataegus monogyna (Jacq.) *flexuosa* (Smith) syn. "*tortuosa*" (Hort.), Singleseed Hawthorn variety

Curiously curled and twisted branches are a characteristic of this variety of the English Hawthorn or May. Reported growing in the Botanical Garden of Amsterdam in 1938.

MA *Crataegus species* #395-32, Hawthorn Species

In 1932 this distinctive Hawthorn species was received from the Arnold Arboretum. A small tree (20-25 ft.) of very twiggy habit, its zigzag interlacing branches curve and recurve in an exceptionally picturesque manner. The foliage is medium sized, of leathery texture and rhombic ovate in shape with irregular lobing and sharply serrate margins. The fruit is dull greenish yellow assuming a ruddy cast with age.

**Cryptomeria japonica cristata* (Beiss) syn. *monstrosa* (Hort.), Japanese Cryptomeria variety

Short, stiff very crowded branchlets fasciated into a cockscomb-like contortion characterize this slow growing, broadly conical variety of the Japanese Cryptomeria. Available from several foreign nurseries.

**Cryptomeria japonica spiralis* (Sieb. and Zucc.), Spiral Japanese Cryptomeria

A mop-like head of contorted cord-like branchlets around which the sickle shaped needles are tightly twisted, sets this dwarf variety apart from the type.

MA *Fagus sylvatica tortuosa* (Pepin), Contorted European Beech

The dwarf spreading habit of the Contorted European Beech suggests its use wherever a choice small specimen is desired. The twisted and contorted branches are pendulous at the tips and bear typical good looking beech foliage. Available.

MA *Fraxinus excelsior monstrosa*, European Ash variety

Two features of this European Ash variety are noteworthy, the fasciated branches and the often alternately arranged leaves. Of botanical interest only.

Juniperus Chinensis pendula monstrosa (Beiss), Chinese Juniper variety

Although recorded by Ludwig Beissner little seems to be known about this variety. It is unreported in cultivation.

MA *Juniperus Chinensis torulosa* (Hort.), Twisted Chinese Juniper

A dark needled variety with gracefully twisted branchlets. Obtained as a plant from the W. B. Clarke Nursery, San Jose, California.

Juniperus virginiana monstrosa (Carr.), Eastern Redcedar Variety

A variety of singular appearance remarkable for the quantity of 'Witches-broom' evident throughout the plant.

Picea Abies pendula monstrosa (Hort.), Weeping Branchless Norway Spruce

Although recognized in botanical literature this variety has not been traced in cultivation. Described as a more extreme form of "*virgata*".

Picea glauca monstrosa (syn. "*alba monstrosa*"), White Spruce Variety

A loosely branched variety of abnormal appearance.

Picea rubens monstrosa, Red Spruce Variety

Known only as a listing in botanical literature.

Pinus nigra monstrosa (Slavin) (syn. "*laricio monstrosa*"—Beiss), Austrian Pine Variety

A sparsely branched dwarf columnar form with irregular contorted branchlets and stiff dark green needles.

**Pinus thunbergii tortusa*, Japanese Black Pine Variety

A form with twisted and contorted branches frequently cultivated in Japanese gardens.

Pseudotsuga taxifolia dumosa (Carr.) (syn. "*monstrosa*"—Beiss), Douglas Fir Variety

A dwarf widespreading variety resembling a "witches'-broom" with thick irregular branches, sometimes declining, sometimes pendent. Furnished with crowded, short, thin and very twisted needles. Originated in Augers, France.

Quercus robur tortuosa, English Oak Variety

Listed as a contorted branched sub-variety of the Cypress Oak, *Quercus robur fastigiata* (syn. "*pedunculata fastigiata*").

MA *Robinia Elliottii* (Ashe), Elliott Locust

This unusual appearing Locust grown from grafts received from the Arnold Arboretum in 1925, displays a habit of growth quite unlike that of other forms. For, instead of conforming to the usual upright pattern of the genus this species spreads horizontally, its branches curving and twisting in a pleasingly graceful manner. It is not a tall shrub, 4 or 5 feet being its maximum here, and it bears foliage proportionate in scale to its stature. The rosy purple flowers are neither abundant nor outstandingly conspicuous.

MA *Robina pseudoacacia tortuosa* (D.C.) Twisted Black Locust

A taller, slow growing variety with short curiously twisted branches sometimes pendulous at the tips. Its floral racemes are small and thinly set with bloom.

MA *Salix Matsudana tortuosa* (Rehd.), Contorted Hankow Willow

The most conspicuous contorted branched plant in the Morton Arboretum collection and the one attracting top attention is this erect growing tree form of the Pekin Willow, a drouth tolerant Chinese species of wide distribution. Polished olive green bark, artistically twisted branches and branchlets and narrow curled foliage combine to provide a subject which is not only a special delight to "arrangers" but a choice item for the plant connoisseur as well. It grows to 25 or 30 ft. in height here and retains its upright stature indefinitely.

**Taxus baccata monstrosa* (Carr) English Yew variety

Described as a "monstrous dwarf bush" with ascending, irregular branchlets many of which are small and stunted. The needles are widely spaced on the twigs. Not in cultivation.

MA *Thuja occidentalis spiralis*, Eastern Arborvitae variety

A spirally arranged branch system characterizes this unique form of stiff pyramidal habit.

Thuja orientalis monstrosa (Carr.), Oriental Arborvitae Variety

A distinct irregular variety showing a "witches'-broom" type of growth. Branches short and much contorted.

MA *Tilia platyphyllos tortuosa*, Contorted Bigleaf Linden

The Contorted Bigleaf Linden, a clean appearing pyramidal tree, was first shown at a meeting of the Royal Horticultural Society in 1888. Although normal in many respects its young branches are curiously curled and twisted, sometimes forming complete loops.

Ulmus carpinifolia suberosa (Maench) *tortuosa* (Rehd.), (syn. "foliaceae suberosa tortuosa"), Corkbark Smoothleaf Elm variety

In 1925 the Arboretum imported a plant of this contorted branched Elm from the Hesse Nurseries in Germany. It failed to persist.

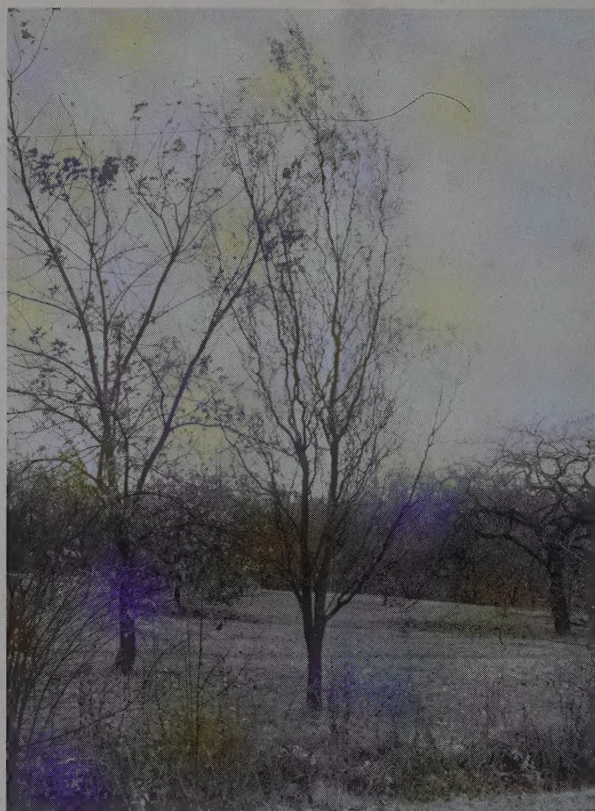
Ulmus glabra monstrosa (Schneid, Rehd.), Wych Elm variety

A compact shrubby variety of the Wych Elm whose branchlets show various degrees of fasciation. Scions were received from the Arnold Arboretum in 1924, but the plant is no longer in our collection.

Ulmus glabra serpentina (syn. "Major" (Smith) "serpentina" (Henry) Wych Elm variety

Although sometimes classed as a pendulous form, this elm of hybrid origin (*montana* x *nitens*) is better known for its curiously twisted and contorted branchlets. A small plant of it in the Arboretum collection succumbed in 1942.

E. L. Kammerer



Contorted Hankow Willow, *Salix Matsudana tortuosa* (Rehd.), one of the most conspicuous contorted branched plants in the Morton Arboretum collection.

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